



11-26-04

Jfn

PTO/SB/21 (02-04)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	10/687,577	
	Filing Date	October 15, 2003	
	First Named Inventor	Mark G. Frei	
	Art Unit	3736	
	Examiner Name	TBD	
Total Number of Pages in This Submission		Attorney Docket Number	011738.00209

ENCLOSURES (check all that apply)

<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment / Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input checked="" type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/ Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____	<input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): PTO/SB/08a (4 pages) with copies of article references; Certificate of Express Mailing (1 page); Return Receipt Postcard		
<table><tr><td>Remarks</td><td>The Commissioner is authorized to charge any fees in connection with this correspondence to Deposit Account No. 19-0733. A duplicate of this sheet is enclosed.</td></tr></table>			Remarks	The Commissioner is authorized to charge any fees in connection with this correspondence to Deposit Account No. 19-0733. A duplicate of this sheet is enclosed.
Remarks	The Commissioner is authorized to charge any fees in connection with this correspondence to Deposit Account No. 19-0733. A duplicate of this sheet is enclosed.			

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Banner & Witcoff, Ltd. Binal J. Patel, Registration No. 42,065
Signature	
Date	November 23, 2004

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.			
Typed or printed name			
Signature		Date	

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



**CERTIFICATE OF MAILING
(PATENT APPLICATION)**

Express Mail No. EV378039909US

Deposited: November 23, 2004

I hereby certify that the attached correspondence, identified below, is being deposited with the United States Postal Service as "Express Mail Post Office to Addressee" under 37 CFR 1.10 on the date indicated above and is addressed to Commissioner for Patents, Mail Stop Amendment, P.O. Box 1450, Alexandria, VA 22313-1450.

By: 

Application of: Frei, et al.

Application No.: 10/687,577

Filing Date: October 15, 2003

Title: Signal Quality Monitoring and Control For A Medical Device System

Transmitted herewith are the following documents:

- ☒ Transmittal Form (1 page) in duplicate
- ☒ Information Disclosure Statement, 1 page
- ☒ Information Disclosure Statement by Applicant PTO/SB/08a, 4 pages, with article references attached
- ☒ Return Receipt Postcard

Attorney Case No.: 011738.00209



PTO/SB/08a (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Institute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 1 of 4

Complete if Known

Application Number	10/687,577
Filing Date	October 15, 2003
First Named Inventor	Mark G. Frei
Art Unit	3736
Examiner Name	TBD
Attorney Docket Number	011738.00209

U.S. PATENT DOCUMENTS

Examiner Initials *	Cite No. ¹	Document Number	Issue/Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code ² (if known)			
		US- 3522811	08/04/1970	Schwartz et al.	
		US- 3850161	11/26/1974	Saul Liss	
		US- 3863625	02/04/1975	Viglione et al.	
		US- 3967616	07/06/1976	Sidney A. Ross	
		US- 3993046	11/23/1976	Fernandez et al.	
		US- 4019518	04/26/1977	Maurer et al.	
		US- 4038536	07/26/1977	Paul L. Feintuch	
		US- 4295474	10/20/1981	Robert E. Fischell	
		US- 4373527	2/15/1983	Robert E. Fischell	
		US- 4417592	11/29/1983	John E. Roy	
		US- 4566464	01/28/1986	Piconne et al.	
		US- 4581758	04/08/1986	Coker et al.	
		US- 4610259	09/09/1986	Cohen et al.	
		US- 4702254	10/27/1987	Jacob Zabara	
		US- 4944299	07/31/1990	Sergiu Sulvian	
		US- 5311869	05/19/1992	Nappholz et al.	
		US- 5269303	12/14/1993	Wernicke et al.	
		US- 5299569	04/05/1994	Wernicke et al.	
		US- 5311876	05/17/1994	Olsen et al.	
		US- 5335657	08/09/1994	Terry Jr. et al.	
		US- 6473639	10/24/2002	Fischell et al.	
		US- 6480743	11/12/2002	Kirkpatrick et al.	
		US- 6560486	05/06/2003	Osorio et al.	
		US- 6591138	07/08/2003	Fischell et al.	
		US- 6597954	07/22/03	Pless et al.	
		US- 6647296	11/11/2003	Fischell et al.	
		US- 2002/0013614	01/31/2002	David L. Thompson	

Examiner
SignatureDate
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Mail Stop Amendment, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 2 of 4

Complete if Known

Application Number	10/687,557
Filing Date	October 15, 2003
First Named Inventor	Mark G. Frei
Art Unit	3736
Examiner Name	TBD
Attorney Docket Number	011738.00209

U.S. PATENT DOCUMENTS

Examiner Initials *	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code ² (if known)			
		US- 5487754	01/30/1996	Snell et al.	
		US- 5626145	05/06/1997	Clapp et al.	
		US- 5683422	11/04/1997	Mark T. Rise	
		US- 5713922	02/03/1998	Gary William King	
		US- 5713923	02/03/1998	Ward et al.	
		US -5716377	02/10/1998	Rise et al.	
		US- 5720770	02/24/1998	Nappholz et al.	
		US- 5743860	04/28/1998	Hively et al.	
		US- 5752976	05/19/1998	Duffin et al.	
		US- 5792186	08/11/1998	Mark T. Rise	
		US- 5978702	11/02/1999	Ward et al.	
		US- 5995868	11/30/1999	Dorfmeister et al.	
		US- 6016449	01/18/2000	Fischell et al.	
		US- 6018682	01/25/2000	Mark T. Rise	
		US- 6066163	05/23/2000	Michael Sasha John	
		US- 6083248	07/04/2000	David L. Thompson	
		US- 6094598	7/25/2000	Elsberry et al.	
		US- 6117066	09/12/2000	Abrams et al.	
		US- 6128537	10/03/2000	Mark T. Rise	
		US- 6128538	10/03/2000	Fischell et al.	
		US- 6134474	10/17/2000	Fischell et al.	
		US-6200265	03/13/2001	Walsh et al.	
		US- 6224549	05/01/2001	Win Van Drongelen	
		US- 6227203	05/08/2001	Rise et al.	
		US- 6230049	05/08/2001	Fischell et al.	
		US- 6337997	01/08/2002	Mark T. Rise	
		US- 6341236	01/22/2002	Osorio et al.	
		US- 6353754	03/05/2002	Fischell et al.	
		US- 6356784	03/12/2002	Lozano et al.	
		US- 6360122	03/19/2002	Fischell et al.	
		US- 6366813	04/02/2002	Daniel J. Di Lorenzo	
		US- 6374140	04/16/2002	Mark T. Rise	
		US- 6427086	07/30/2002	Fischell et al.	
		US- 6459936	10/01/2002	Fischell et al.	
		US- 6466822	10/15/2002	Benjamin D. Pless	
		US- 6473639	10/24/2002	Fischell et al.	

Examiner
SignatureDate
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Mail Stop Amendment, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Substitute for form 1449B/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet

3

of

4

Complete if Known

Application Number	10/687,577
Filing Date	October 15, 2003
First Named Inventor	Mark G. Frei
Art Unit	3736
Examiner Name	TBD
Attorney Docket Number	011738.00209

NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		Alan V. Oppenheim & Ronald W. Schaffer, Digital Signal Processing, Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1975, pg. 18-24.	
		Gotman J., & Gloor, P., "Automatic Recognition and Quantification of Linterictal Epileptic Activity in the Human Scalp EEG", Electroencephalography and Clinical Neurophysiology, 1976, 41:513-529.	
		B. Litt and J. Echauz, "Prediction of Epileptic Seizures", 1 The Lancet Neurology 22 May 2002	
		H. Qu & J. Gotman, "A Seizure Warning System For Long-term Epilepsy Monitoring", 45 Neurology 2250, 1995	
		J. Gotman, "Automatic Recognition of Epileptic Seizures in the EEG", 54 Electroencephalography and Clinical Neurophysiology at 530-540, 1982	
		Lapkin et al., "The Electroencephalogram in Childhood Basilar Artery Migraine", 27Neurology 580-583, June 1977)	
		Murro et al., "Computerized Seizure Detection of Complex Partial Seizures", 79 Electroencephalography and Clinical Neurophysiology 330-333 (1991)	
		P. Rajna and C. Lona, "Sensory Stimulation for Inhibition of Epileptic Seizures", 30(2) Epilepsia 168-174, 1989	
		R.P. Lesser et al., "Brief Bursts of Pulse Stimulation Terminate Afterdischarges Caused by Cortical Stimulation", Neurology 53, December 1999	
		Webber, W.R.S. et al., "Automatic EEG Spike Detection: What Should the Computer Imitate", 87 Electroencephalography and Clinical Neurophysiology 330-333 (1993)	
		Grassberger, Peter et al., "Characterization of Strange Attractors" Vol. 50, No.5., The American Physical Society, January 31, 1983.	

Examiner
Signature

Date

Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 120 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Mail Stop Amendment, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449B/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 4 of 4

Complete if Known

Application Number	10/687,557
Filing Date	October 15, 2003
First Named Inventor	Mark G. Frei
Art Unit	3736
Examiner Name	TBD
Attorney Docket Number	011738.00209

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		Iasemidis, L. D. and Sackellares, J. C. "Chaos Theory and Epilepsy". The Neuroscientist, 2:118--126, 1996. <retrieved from http://citeseer.ist.psu.edu/iasemidis96chaos.html >	
		Elger, Christian E., et al., "Short Communication: Seizure Prediction By Non-Linear Time Series Analysis of Brain Electrical Activity" European Journal of Neuroscience, Vol. 10, pgs. 786-789 (1998)	
		Gotman, J., "Seizure Recognition and Analysis", Montreal Neurological Institute and Department of Neurology and Neurosurgery, McGill University, Montreal, Quebec. H3A 2B4 (Canada)	
		Vachtsevanos, G.J., et al. "Neuro-Fuzzy Approaches to Decision Making: A Comparative Study With An Application to Check Authorization" Journal of Intelligent and Fuzzy Systems, Vol. 6, pgs. 259-278 (1998)	
		Osorio, Ivan, et al., "Real-Time Automated Detection and Quantitative Analysis of Seizures and Short-Term Prediction of Clinical Onset" Epilepsia, Vol. 39(6) pgs. 615-627, (1998)	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 120 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Mail Stop Amendment, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.